IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

GEOTAG, INC.	§	
	§	
Plaintiff,	§	
v.	§	**CIVIL ACTION NO.**
	§	**3:13-CV-00169-K**
AT&T MOBILITY, LLC. &	§	
AT&T SERVICES, INC..,	§	
	§	
Defendants.	§	

MARKMAN MEMORANDUM OPINION AND ORDER

Before the Court are the Parties' briefs on the issue of claim construction of the patent in suit, U.S. Patent Number 5,930,474 ("the '474 Patent") The Court conducted a *Markman* hearing and has reviewed the Parties' briefs and all related filings and evidence, including the patents in suit, the specifications, the patent prosecution histories to the extent it was submitted by the Parties, as well as the Parties' proposed claim constructions. The Court hereby construes the disputed claims according to *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 360 (1996).

I. Background

A. Procedural

The matter before the Court stems from litigation initiated in the Eastern District of Texas. Geotag initiated suit in the Eastern District of Texas under No. 2:10-CV-570-TJW by filing a Complaint for Patent Infringement. The complaint

named many Defendants in that action, including the current Defendants in the matter before this Court. The case in the Eastern District of Texas was severed as to the current Defendants before this Court and the case against AT&T Mobility, LLC and AT&T Services, Inc. was transferred to this Court. The suits in the Eastern District of Texas remained ongoing as to the remaining Defendants in that matter and is still currently pending in that Court.

In addition to this ongoing litigation and the litigation over the same patent in the Eastern District of Texas, Geotag and its predecessor in interest in the patent in suit have filed other cases alleging infringement of the same patent. These include two other suits in the Eastern District of Texas. These are *Geotag, Inc. v. Frontier Comm. Corp., et al.*, Case No. 2:10-CV-265 ("*Frontier*") and *Geomas (Int'l) Ltd., et al. v. Idearc Media Services-West, Inc.*, Case No. 2:06-CV-00475. In addition to these suits, Microsoft and Google filed a declaratory judgment action regarding the validity of the patent in suit against Geotag in the District of Deleware, *Microsoft Corp. and Google, Inc. v. Geotag, Inc.*, Case No. C.A. 11-175-RGA.

To the extent that the various District Courts have construed the claim language of the patent in suit and the Parties in the current litigation before this Court have submitted such claim construction orders, the Court has reviewed the opinions of those Court as they relate to the terms in dispute in the current matter before the Court. The Court notes, however, that such opinions issued by other District Courts are not mandatory authority to this Court. They are certainly

persuasive authority, and the Court gives due deference to the opinions of the other Courts. The Court notes that in these other proceedings the parties, the disputed claim language, the positions of the parties, the arguments of the parties, and the evidence before the Courts varied. Depending on these factors, the various claim constructions of the other Courts may or may not be directly relevant to the claim construction before this Court in this matter.

B. The Patent in Suit

The '474 Patent describes the invention of systems, machines, and methods for organizing and searching data. The '474 Patent, entitled "Internet Organizer For Accessing Geographically and Topically Based Information," was issued by the USPTO on July 27, 1999. The invention describes a system in which data is organized into topics and geographical areas. The disclosed invention is particularly useful for performing internet searches when an end user of the system or machine wants to locate a particular type of location, such as a store or business, within a certain geographical area. Because the information is organized into both topical content and geographical areas, an end user can input or select the desired topics and/or geographical areas that are to be searched. The search will then be limited to the particular selected topics within the particular selected geographic areas. For example, an end user who wishes to locate a hardware store within the city of Dallas, Texas, can select or input the "hardware store" topic and the "Dallas, Texas" geographical area. The system can then perform a topical search for "hardware store"

within the information that is associated with the "Dallas, Texas" geographical area. The system then returns the results that includes information such as the name, address, and phone number of the store to the end user who now knows where he or she can find a hardware store within Dallas, Texas. While the invention may be particularly useful for this type of internet search, it is not limited to this one use. It is clear that the systems, methods, and machines claimed in the invention could be used in any type of situation where one desires to relate topical information and geographical areas. Organizing data into a searchable format that is associated with both a topic and a geographical area was already known at the time of the invention.

The uniqueness of the '474 Patent stems from that fact that entries within the database are "dynamically replicated" so that the entries correspond to the desired search area. While it is clear that this dynamic replication is the feature that the inventors' claimed that makes the invention unique and patentable, the exact meaning of dynamic replication is one of the key points of contention in this matter. The meaning of the phrase "dynamic replication" is disputed by the Parties, and it is one of the phrases within the claim language that is construed herein and discussed fully below. Generally the dynamic replication feature of the invention refers to the fact that the information is not necessarily stored in the system with a reference to each and every possible geographic area that a user may desire to search. Instead that information may be stored and associated within a larger geographical area than the user desires to search. When the user performs a search, the relevant information for

the desired search area is dynamically replicated. For example, when the user selects a smaller geographical area, than the larger geographical area where the information is stored, the information related to the desired search area is replicated dynamically, so as to create a new collection of information that is limited to the user's desired search area. It is this dynamic replication feature, that the inventors claim is unique, was unknown in the prior art, and makes the invention patentable.

II. Applicable Law - Principles of Claim Construction

Claim construction is a matter of law. *See Markman*, 52 F.3d at 979. The Federal Circuit Court has held that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). The Supreme Court has stated that the claims are "'of primary importance, in the effort to ascertain precisely what it is that is patented.'" *Phillips*, 415 F.3d at 1312 (quoting *Merrill v. Yeomans*, 94 U.S. 568, 570 (1876)). A court looks to three primary sources when determining the meaning of claims: (1) the claims, (2) the specification, and (3) the prosecution history. *Markman*, 52 F.3d at 979. The claims of the patent must be read in view of the specification of which they are a part. *Id.* The specification consists of a written description of the invention which allows a person of ordinary skill in the art to make and use the invention. *Id.* This description may act as a dictionary explaining the invention and defining terms used in the claims. *Id.* Although a court should generally give such terms their ordinary meaning, a patentee may choose to be his own lexicographer and use terms

in a manner other than their ordinary meaning, so long as the special definition of the term is clearly stated in the patent specification or file history. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

The court starts with the claim itself, read in light of the specification. *See Vivid Technologies, Inc. v. American Sci. & Eng'g, Inc.*, 200 F.3d 795, 804 (Fed. Cir. 1999). While the claims themselves provide significant guidance as to the meaning of a claim term, the specification is generally dispositive as "it is the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1314-1315. In addition to the claim language and specification, the prosecution history is often helpful in understanding the intended meaning, as well as the scope of technical terms in the claims. *See Vivid*, 200 F.3d at 804. In particular, the prosecution history is relevant in determining whether the patentee intends the language of the patent to be understood in its ordinary meaning. Using these tools, the court construes only the claims that are in controversy and only to the extent necessary to resolve the dispute. *Vivid*, 200 F.3d at 803.

The words of a claim are usually given their ordinary and customary meaning. *See Phillips*, 415 F.3d at 1312. Ordinary and customary meaning is the meaning the claim term would have to a person of ordinary skill in the art (e.g., field of the invention). *See Id.* at 1313; *Markman*, 52 F.3d at 979. A person of ordinary skill in the art would read the claim term in the context of the entire patent, including the specification, not just the particular claim where the term appears. *Phillips*, 415 F.3d

at 1313. There are instances where the ordinary meaning of claim language, as a person of skill in the art would understand it, "may be readily apparent even to lay judges," thereby requiring "little more than the application of the widely accepted meaning of commonly understood words." *Phillips*, 415 F.3d at 1314. In these situations, general purpose dictionaries are useful. *Id.*

In many cases, the court must determine the ordinary and customary meaning of the claim terms that have a certain meaning in a field of art. *Id.* The court can look to "those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean." *Id.*. These sources can include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of the technical terms, and the state of the art." *Id.*.

Aside from the written description and the prosecution history, the claims themselves also offer assistance as to the meaning of certain claim terms. *Id.* (citing *Vitronics*, 90 F.3d at 1582).

When the intrinsic evidence, that is the patent specification and prosecution history, unambiguously describes the scope of a patented invention, reliance on extrinsic evidence, which is everything outside the specification and prosecution history, is improper. *See Vitronics,* 90 F.3d at 1583. While the Court may consult extrinsic evidence to educate itself about the invention and relevant technology, it may not rely upon extrinsic evidence to reach a claim construction that is clearly at

odds with a construction mandated by the intrinsic evidence. *See Key Pharm. v. Hercon Lab. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998).

III. Construction of the Disputed Patent Claims and Terms

A. Priority Terms Needing Construction - Disputed Claim Language

The Parties have submitted to the Court sets of priority terms/or phrases that require claim construction. The Parties dispute the meaning of 1) "entry" and "entries;" 2) "geographical search area;" 3) "dynamically replicated" and "dynamically replicating;" 4) "hierarchy'" and 5) certain phrases that use the disputed terms, which the Parties refer to as the "larger dynamically replicated terms." These disputed terms appear in Claims 1, 20, and 31 of the '474 Patent. Since the meanings of these phases and terms are at issue in this matter, the Court must and hereby does construe these phrases and terms.

Claim 1 of the '474 Patent reads as follows:

> "A system which associates on-line information with geographic areas, said system comprising:
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> a computer network wherein a plurality of computers have access to said computer network; and
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> an organizer executing in said computer network, wherein said organizer is configured to receive search requests from any one of said plurality of computers, said organizer comprising:
>
> a database of information organized into a hierarchy of geographical areas wherein entries corresponding to each one of said hierarchy of geographical areas is further organized into topics and
>
> a search engine in communication with said database, said search engine configured to search geographically and topically, said search engine further configured to elect one of

> said hierarchy of geographical areas prior to selection of a topic so as to provide a geographical search area wherein within said hierarchy of geographical areas at least one of said entries associated with a [broader] geographical area is dynamically replicated into at least [one] narrower geographical area, said search engine further configure to search said topics within said selected geographical search area." '474 Patent at 38:36-58.

Claim 20 of the '474 Patent reads as follows:

> "A machine for locating information organized into geographically-based areas, said machine comprising:
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> a database of information accessible [by] a computer, said database of information organized into a predetermine hierarchy of geographical areas comprising at least a geographical area of relatively smaller expanse and a geographical area of relatively larger expanse, said area of larger expanse including a plurality of areas of smaller expanse and wherein entries corresponding to each said hierarchy of geographical area is further organized into topics; and
>
> a search engine executing in a computer and in communication with said database, said search engine configured to select at least one geographical area in said hierarchy of geographical areas so as to define a geographical search area wherein at least one of said entries in said geographical area of relatively larger expanse is dynamically replicated into at least one of said geographical areas of smaller expanse, said search engine further configured to search said topics within said geographical area." '474 Patent at 39:41-61.

Claim 31 of the '474 Patent reads as follows:

> "A method for locating on line information comprising the steps of:

> organizing a database of on-line information into a plurality of geographical areas having a plurality of entries associated therewith;
> organizing said entries corresponding to said plurality of geographical areas into one or more topics;
> directing a search engine executing in a computer to select one or more of said geographical areas so as to select a geographical search area;
> dynamically replicating an entry from broader geographical area into said geographical search area; and
> displaying said topics associated with said geographical search area." '474 Patent at 40:40-56.

B. Person of Ordinary Skill in the Art

Preferably, this Court gives the words of a claim their ordinary and customary meaning; in other words, the meaning the claim term would have to a person of ordinary skill in the art. *See Phillips*, 415 F.3d at 1312-13; *Markman*, 52 F.3d at 979. A person of ordinary skill in the art would read the claim term in the context of the entire patent, not just the particular claim where the term appears. *Phillips*, 415 F.3d at 1313. The Court holds that a person of ordinary skill in the art for the '474 Patent is a person with a bachelor's degree in computer science or an equivalent degree with three to five years of work experience or graduate studies experience in the fields computer science, computer programming, or software/database design.

C. Construction of "entries" and "entry"

i. Each Party's Proposed Constructions

The Parties dispute the meaning of the phrases "entry" and "entries" as they are used in the Claims 1, 20, and 31 of the '474 Patent. The Parties are in agreement, however that the only difference between construction of "entry" and "entries" is that the construction of entries is simply the plural construction of entry. The Parties are also in agreement that the meaning of entry is the same as used in Claims 1, 20, and 31. Therefore the Court will construe the meaning of "entry" and "entries" accordingly. Furthermore, for the sake of simplicity, the Court, in this order, will simply refer to "entries" to refer to both the singular and plural version of the terms.

Geotag proposes that the Court construe "entries" to mean "listings that are contained in the database and that each includes one or more fields." Joint Statement Narrowing the Disputed Terms for Construction. AT&T proposes that the Court construe "entries" to mean "listings contained in the database that each includes a collection of fields." Id. Therefore, the dispute as to the meaning of entries is whether the entries are required to include "one or more fields" or whether the entries are required to include a "collection of fields." The major difference between the two proposed constructions being whether or not an entry can have only one field. Geotag proposes that an entry can have only one field or may have more than one. AT&T proposes that an entry must be a collection of fields; therefore, requiring an entry to have least two fields.

Geotag, in support of its argument that entries have "one or more fields," points to the broad usage of the term "entry" in the '474 Patent specifications.

Geotag Inc.'s Opening Claim Construction Brief at 7-8. Geotag argues that the term is used narrowly to describe specific individual items and broadly to describe collections of data. Id. It argues that because the specifications use "entry" both narrowly and broadly, then the claim language should be construed to give the meaning a broad construction. Geotag claims that the construction of "entries" should allow entries to have only one field, which is broader than requiring that entries have at least two fields.

AT&T, in support of its argument that entries have a collection of fields, i.e. at least more than one, argues that the specifications and claims do not support a construction of "entries" that allows entries to have only one field. Defendants' Opening Claim Construction Brief at 18-20. AT&T points the Court's attention to many descriptions, in the '474 Patent specifications, of entries in databases. Each of these examples, AT&T argues, show entries that have multiple fields. AT&T argues that the claim language itself supports a construction that requires entries to have more than one field. The claim language requires, according to AT&T, that entries in the database be associated with at least a geographical area and a topic. Since the entries have to be associated with at least these two pieces of information, AT&T argues, entries must contain more than one field.

ii. Court's Construction of "entries" and "entry"

The Court is of the opinion that "entries," as used in the '474 Patent claim language, requires that the entries in the database have more than one field. The

claim language itself and the specifications support such a construction. Geotag is correct in that the specifications use the term "entry" in both a broad and narrow manner, but it is apparent from the claim language that when the phrase is used in the claim language, the inventors are referring to entries containing a collection of fields, not to entries that could only have one field.

The Court starts with the claim language. While the specifications and file wrapper of a patent provide insight into the meaning of a claim term, in some cases the claims themselves provide greater insight into the meaning of particular claim terms. *Phillips v. AWH Corp.*, 415 F.3d at 1314. The claim language provides that insight in this case. The claim language describes a database that is composed of entries where "entries corresponding to each … geographical area is further organized into topics …" '474 Patent at 38:44-47. The claims also require a search engine that is "configured to search geographically and topically" and is "configured to search said topics within said selected geographical search area." '474 Patent at 38:48-58.

As the claim language makes clear, it is necessary for entries to contain at least a reference to the geographical area associated with each entry and to the topic associated with each entry. In other words, a particular entry must have fields for both a geographic area and a topic. The construction of "entries" must take into consideration that the claim language does not allow for entries that have only one field.

The specifications of the '474 Patent loosely use the term "entry." Like Geotag points out, sometimes the specifications use the term to refer to an individual item or piece of data. For example, the specifications provide "… when it is desired to display a list of common **entries**, such as all cities …" and "when the Dview parameter is specified as "CITY," the displayed entry will simply be the city name designated as the NameKey parameter." '474 Patent at 11:65-12:6. In this example, the inventors used the term "entry" to refer to the displayed name of a city chosen by the user. As a further example of this type of usage of the term, the '474 Patent also provides "… the **entry** 'Points of Interest for Los Angeles' generates a call to the geographic search engine …" ('474 Patent at 22:41-42) and "… the **entry** 'California' generates a call to the geographical search engine …" (474 Patent at 61-62.) In these examples, the term "entry" is again used to designate a particular geographic region, California, and a list of points of interest for a particular city.

By contrast the '474 Patent also uses the term "entry" to refer to collections of data. For example, Table 7 of the '474 Patent and the related discussion provides a clear example of this type of use of the term "entry." '474 Patent at 18:60-18:63; 31:62-36:25. As discussed by the specifications, Table 7 provides "sample **entries for the geographic database** …" Id. These examples, provided by Table 7, show that the entries mentioned by the inventors are collections of data. In particular, Table 7 shows the various attributes associated with different geographical areas within the database. The specifications go on to describe that the data contained within the

geographic database also includes reference fields ('474 Patent at 19:30); title fields ('474 Patent at 19:41); label fields that include text fields; bullet fields ('474 Patent at 19:64); description fields ('474 Patent at 20:7.) This example clearly lays out that entries in this specific embodiment contain multiple fields.

In a similar manner, the '474 Patent specifications also describe that the structure of the "Yellow Pages Database" embodiment also consists of entries that contain a multitude of fields. '474 Patent at 24:28-25-20; Figure 17; Table 9 37:36-67. Figure 17, Table 9, and the related discussion in the specifications all clearly provide multiple examples of fields associated with the entries in the yellow page database, such as: name, address, phone, fax, expire date, and other various fields. Id. When the term "entry" is used in this manner (i.e. to describe the structure of data in a database) in the specifications, the entries are always associated with more than one field.

While it may be the case that the inventors used the term "entry" in more than one way in the specifications, the meaning of "entry" in the claim language is not used so broadly and should not be construed as if it was. Often, when an inventor uses a certain phrase or term in a broad manner in patent specifications, it would be correct to impart the same broad meaning into the same phrase if it is used in the claim language, but, the goal of claim construction is to ascertain the true meaning of the claim language. To do so, this Court must determine the true nature and scope of

claimed invention. A construction that most closely aligns itself with the nature and extent of the invention is the correct claim construction.

In the '474 Patent, construing the claim term "entries" broadly because the inventors' used the phrase in the specifications in more than one way would improperly give the claim language more breadth than it deserves. Geotag asserts that the claim language should be given a broad construction because of the different ways that the inventors used the term "entry" in the specifications. A closer examination of the use of the terms and the claim language reveals that this is not the proper construction of that term.

The specifications use "entry" to describe a particular item or piece of data and to describe a collection of data, but when "entry" is used to describe a particular item of data, the inventors are not referring to entries in a database. They are merely referring to a particular category or categories of particular geographic areas. The use of "entry" in this way is limited to describing things like "Points of Interest for Los Angeles," "California," or a particular city. These are not references to database entries. They are simply references to different categories that can be used to designate different geographical areas or topics.

In contrast, when the '474 Patent specifications refer to "entries" in the other way that the inventors used the term "entry", they are specifically referring to database entries. As discussed above, Table 7 and particularly the related specification discussion provide examples of the type of data that is **stored within a geographical**

database entry. Table 9, Figure 17, and the related discussion do the same thing for the type of **data that is stored in the yellow page database** embodiment. In addition, when the term "entries" is used in this manner, it is always associated with multiple fields.

The two uses of entry in the specifications are two very distinct usages and the usage associated with the way that information is stored in the databases is the correct usage to apply to the claim construction because that usage aligns with the nature and scope of the claim invention. The claim language is specifically describing the entries that are **in the database**. Claim 21 provides "… a **database of information** organized into a hierarchy of geographical areas **wherein entries** corresponding to each one of said hierarchy of geographical areas is further organized into topics …" '474 Patent at 41-61. This language clearly indicates that the term "entries" in the claim refers to those that are **in the database**. The other claims have similar language, and they all describe entries as being in the database. The correct construction of "entries" must take into account the distinct manner in which the term is used in the claim language. Since the disputed claim language is being used to describe the data stored within a database, the construction of "entries" should correspond to that particular usage in the specifications. This construction takes into account the true nature and scope of the claimed invention. A person of ordinary skill in the art would understand that the claim language is referring to the data stored within the database and that the meaning of this term in the claim language would be

associated with the specification's description of the entries stored within the database.

A construction that adopts or includes the other manner that the inventors used "entries" in the specifications (i.e. to refer to one particular item) would lead to illogical meanings in the claim constructions. Their usage of the term is used in the specifications to refer to particular geographic areas or topics that could be selected by a user. For example, one use of the term in this way refers to the entry "California." California is a geographical area. The parties are in agreement that the claims require dynamic replication of the entries from one geographical area into another geographical area. If "California," a geographical area, was an entry, as contemplated by the claims, the claim requirement that the "California" entry be dynamically replicated from a larger geographical area into a smaller geographical area would not make any sense. This incorrect interpretation of the claim language and meaning of the invention would result in an absurd meaning of the claim language.

Geotag's argument that entries should be construed broadly so they may contain only one field is not persuasive. Because the claim language requires that entries have at least two fields (one for geographical area and one for topic), the disputed claim language is referring to entries in a database, and the specifications only teach entries in databases that have multiple fields; the Court construes "entries" to mean "listings contained in the database that each includes a collection of fields" and "entry" to mean "listing contained in the database includes a collection of fields."

D. Construction of "geographical search area"

i. Each Party's Proposed Constructions

The Parties dispute the meaning of the phrase "geographical search area" used in the Claims 1, 20, and 31 of the '474 Patent. The Parties are in agreement that the meaning of "geographical search area" is the same throughout the '474 Patent. For that reason the Court will construe the meaning of "geographical search area" in the same way throughout the '474 Patent.

Geotag proposes that the Court construe "geographical search area" to mean "the particular selected geographical area within the database for which the associated data records in the database are to be searched." Joint Statement Narrowing the Disputed Terms for Construction. AT&T proposes that the Court construe "geographical search area" to mean "the particular selected geographical area of the hierarchy of geographical areas within the database for which the associated entries in the database are to be searched." Id. There are two major differences between the proposed constructions. First, AT&T requests that the construction of "geographical search area" specify that this area is a particular area "of the hierarchy of geographical areas," while Geotag contends that requiring the geographical search area to be "of the hierarchy of geographical areas" improperly limits the claims. Second, Geotag contends that what is searched are the "data records" of the database, while AT&T argues that what is searched are the "entries" of the database.

In support of the argument that the geographical search area is "of the hierarchy of geographical areas" within the database, AT&T argues that the claim language dictates that the search area be an area that is part of the hierarchy of geographical areas. Defendants' Opening Claim Construction Brief at 16-18. AT&T points to the claim language in Claims 1 and 20. Id. Claim 1 requires a "hierarchy of geographical areas" and a search engine that is configured "… to select one of said hierarchy of geographical areas prior to selection of a topic so as to provide a geographical search area …" '474 Patent at 38:35-58. Claim 20 has very similar language that also requires a hierarchy of geographical areas and a search engine configured to select one of the areas within the hierarchy to define the geographical search area. Id at 39:41-61. AT&T contends that its proposed construction aligns with the claim language by requiring that the search area to be defined as one of the areas within the hierarchy of geographical areas. Defendants' Opening Claim Construction Brief at 16-18. For Claim 31 which does not explicitly require a hierarchy of geographical search areas, AT&T appears to argue that the dynamic replication of entries, which is required by Claim 31, from broader to narrower areas implies that Claim 31 also requires a hierarchy of geographical search areas. Id. AT&T appears to argue that there must be a hierarchy of geographical areas because there are both broad and narrow geographical areas. Id.

Geotag argues that inclusion of a requirement that the geographical search area is "of the hierarchy of geographical areas" in the claim construction improperly

narrows the claim language. Geotag Inc.'s Opening Claim Construction Brief at 13-14. Specifically, Geotag points out that Claim 31 of the '474 Patent does not actually require a "hierarchy of geographical areas." Id. Geotag argues that Claim 31 requires a "plurality of geographical areas." Id. Geotag argues that inclusion "of the hierarchy of geographical areas" in the claim construction, would improperly limit the Claim 31 because the claim language does not require a hierarchy of geographical areas. Id. Geotag argues that Claim 20 allows for selection of one or more geographical areas within the hierarchy. Id. It argues that inclusion of the disputed phrase would also improperly narrow Claim 20 because this would limit the geographical search to a single hierarchy of geographical areas, which is in direct conflict with the claim language. Id.

The Parties also dispute whether "data records" or "entries" are searched within the "geographical search area." Geotag's proposed construction indicates that "data records" are searched. Id. AT&T's proposed construction indicates that "entries" are searched. Defendants' Opening Claim Construction Brief at 16-18. AT&T argues that the claim language makes it clear that "entries" are what are contained within the database and that is what is searched within the "geographical search area." Id. Geotag does not provide any support or argument why the construction should indicate that "data records" and not "entries" are searched. Geotag Inc.'s Opening Claim Construction Brief at 13-14. Geotag simply inserts

"data records" into the construction without any support or explanation why this construction is correct. Id.

ii. Court's Construction of "geographical search area"

The Court is of the opinion that inclusion of the "of the hierarchy of geographical areas" into the construction of "geographical search area," as proposed by AT&T would improperly limit the claim language. The Court is also of the opinion that what is actually searched within the "geographical search area" are the entries, not data records. The claim language supports this construction and the Court will construe "geographical search area" in this manner.

Adoption of a construction of "geographical search area" that includes the requirement that the geographical search area be one of the areas of the hierarchy of geographical areas would improperly limit the claims. The improper limitation on the claims, which would be caused by accepting AT&T's proposed construction, is the clearest in regards to Claim 31. Claim 31, as Geotag points out, does not actually require a hierarchy of geographical search areas. Claim 31 recites that the one of the steps of the claimed method involves "…organizing a database of on-line information into a **plurality of geographical areas** having a plurality of entries associated therewith …." '474 Patent at 40:43-56. Another step of the method is "… directing a search engine executing in a computer to select one or more of **said geographical areas** so as to select a **geographical search area** …" Id. The claim language itself makes it clear that geographical search area is selected from a plurality of geographical

areas, not from a hierarchy of geographical areas. In fact, Claim 31 never mentions a "hierarchy of geographical areas."

This is in sharp contrast to the language of Claim 1. Claim 1 recites that one of the components of the claimed system is "… a database of information organized into **a hierarchy of geographical areas** …." '474 Patent at 38:35-38. Claim 1 goes on to recite that another component of the claimed system is a search engine that is "… configured to elect **one of said hierarchy of geographical areas** prior to selection of a topic **so as to provide a geographical search area wherein within said hierarchy of geographical areas** …" Id. Claim 1, therefore, does in fact require a hierarchy of geographical areas and that the selected "geographical search area" be one of the areas within that hierarchy of geographical areas. Claim 20 recites very similar requirements for the information to be organized into a hierarchy of geographical areas and for the geographical search area to be selected from that hierarchy. Id at 39:41-61.

Adoption of a construction of "geographical search area" that requires that this area be within the hierarchy of geographical areas would improperly limit the meaning of the phrase because that construction would import the hierarchy requirement into Claim 31, which does not require a hierarchy of geographical areas.

The inventors clearly chose to differentiate, in the claim language, between a "hierarchy of geographical areas" and a "plurality of geographical areas." The change in the claim language between Claims 1 and 20 and Claim 31, indicate that the

inventors meant to claim something different in each claim. As just discussed, Claims 1 and 20 claim hierarchies of geographical areas, while Claim 30 claims a plurality of geographical areas. If the inventors intended Claim 31 to be a hierarchy of geographical areas then they would have simply included this requirement in the claim language, like they did for Claims 1 and 20. They did not choose to do so. They modified the language of Claim 31 to claim a plurality of geographical areas. It would be improper to adopt a construction that negates this distinction made by the inventors. If the Court adopted a construction that required all "geographical search areas" to be "of the hierarchy of geographical areas," this construction would negate this distinction.

Claim 32, which is a dependent claim of Claim 31 makes clear that the inventors' intended to make a distinction between pluralities of geographical areas and hierarchies of geographical areas. Claim 31 requires a plurality of geographical areas. Claim 32 reads as follows: "The method of Claim 31 wherein said geographical areas are hierarchically organized." Id at 40:57-58. This dependent claim makes it clear that there is a distinction between pluralities of geographical areas and hierarchies of geographical areas. A dependent claim is used to narrow an independent claim. That is exactly what dependent Claim 32 does to independent Claim 31. Claim 31 broadly claims a plurality of geographical areas, which is not imposed with any particular type of structure. Claim 32 takes that plurality of areas and further imposes that it be organized hierarchically. Id. If the Court was to adopt

a construction of "geographical search area" that required the geographical areas of Claim 31 to be organized hierarchically, then this construction would totally negate Claim 32.

Adoption of a construction that requires the "geographical search area" to be "of the hierarchy of geographical areas" would merely be repetitive when applied to Claim 1 and Claim 20. These claims already contain language that requires that the geographical search area to be "of the hierarchy of geographical areas." Id. at 38:35-38; 39:41-61. Since the claims already impose such a limitation on the geographical search area there is no need to repeat this limitation. At best it would be redundant to include the requirement that the "geographical search area" was "of the hierarchy of geographical areas." At worst, such a construction could lead to ambiguity in the claim language and confusion of the jurors.

Regarding Geotag's proposal that the construction of "geographical search area" should indicate that "data records" are what are searched, the Court does not find any support for this construction. Geotag in its briefing does not provide any argument or support for its inclusion of "data records" in the construction of "geographical search area." Furthermore, as AT&T points out, the claim language itself makes it clear that what is contained within the database are "entries," not "data records." The language of Claims 1, 20, and 31 all require a database that contains "entries." Id. at 38:35-58; 39:41-61; 40:43-56. These entries are further associated with both geographical areas and topics. They all also require the

capability to search or display the topics within the geographical search area. Since the topics that are searched or displayed are the topics within the entries, it is the entries that are searched within the geographical search area. The language of Claims 1, 20, and 31 make no reference at all to "data records."

Some dependent claims of the '474 Patent, refer to "data records." Each of the independent Claims 1, 20 and 31 have a following dependent claim that further requires the "entries" to be composed of "data records." Claim 24 recites, "The machine of Claim 20, wherein said entries comprise data records …" (Id at 40:5-7); Claim 18 recites, "The system of Claim 1, wherein said entries comprises a plurality of data records …." (Id at 39:34-37); and Claim 36 recites, "The method of Claim 31 herein said entries comprise data records …" (Id at 40:66-41:2.) As just stated, the purpose of a dependent claim is to further narrow the independent claims. Since each of these dependent claims require that the "entries" be "data records," "entries" and "data records," as used in the '474 Patent claims must have two different meanings and the meaning of "entries" must be broader than the meaning of "data records." To construe the phrase "geographical search area" of Claims 1, 20, and 31 to mean that "data records" where to be searched would negate this distinction. This proposed construction would negate dependent Claims 18, 24, and 36.

A construction of "geographical search area" that imposes that this area be "of the hierarchy of geographical areas" would improperly limit Claim 31, would be redundant in Claims 1 and 20, and would negate the inventors' distinction between

pluralities of geographical areas and hierarchies of geographical areas. A construction of "geographical search area" that requires data records to be searched, as opposed to entries being searched, would be contrary to the clear language of Claims 1, 20, and 31 and would negate the inventors' clear distinction between the meanings of "entries" and "data records." For these reasons, the Court construes "geographical search area" to mean "the particular selected geographical area within the database for which the associated entries in the database are to be searched."

E. Construction of "dynamically replicated" and "dynamically replicating"

i. Each Party's Proposed Constructions

The Parties dispute the meaning of the phrases "dynamically replicated" and "dynamically replicating" as they are used in the Claims 1, 20, and 31 of the '474 Patent. The Parties are in agreement, however that the only difference between construction of "dynamically replicated" and "dynamically replicating" is the tense of the construction. The Parties are also in agreement that the meaning of "dynamically replicated" and "dynamically replicating" is the same throughout the claims of the '474 Patent. The Court will construe the meaning of "dynamically replicated" and "dynamically replicating" with the same meaning. For the sake of simplicity, the Court will simply refer to "dynamically replicated" to refer to both versions of the phrase.

Geotag proposes that the Court construe "dynamically replicated" to mean "automatically copied or inherited, within the database, at the time needed rather than at a time decided or established in advance." Joint Statement Narrowing the Disputed Terms for Construction. AT&T proposes that the Court construe "dynamically replicated" to mean "automatically inherited within the database at the time of a search." Id. The Parties have two points of disagreement about the construction of "dynamically replicated." First, the Parties disagree as to whether or not dynamic replication means that the information is "inherited or copied" or if it is simply "inherited." Geotag proposes that the phrase encompasses both inheriting and copying. AT&T proposes that the phrase only refers to inheriting. Secondly, the Parties dispute the timing of the dynamic replication. Geotag proposes that the dynamic replication occurs "at the time needed rather than at a time decided or established in advance." AT&T proposes that the dynamic replication occurs at "the time of a search."

In support of its argument that dynamic replication of entries means either inheriting or copying entries, Geotag argues that the patent supports a construction of "dynamic replication" that includes copying and that two other Federal Courts and the USPTO have interpreted the phase so that it includes copying. Geotag Inc's Opening Claim Construction Brief at 11-13.

In support of its argument that "dynamic replication" only includes inheriting, AT&T argues that the '474 Patent specification does not support a construction of

the phrase that includes the concept of copying. Defendant's Opening Claim Construction Brief at 8-12. AT&T also argues that the file wrapper indicates that the patent examiner understood "dynamically replicated" to mean "automatically inherited" which does not include copying. Id.

ii. Court's Construction of "dynamically replicated" and "dynamically replicating"

The Court is of the opinion that the '474 Patent specifications do not support a construction of "dynamic replication" that includes "copying." Furthermore, the file wrapper indicates that the disputed phrase means "automatically inheriting."

The claim language does not provide any guidance as to the meaning of "dynamically replicated." Originally, the '474 Patent application did not include claims that included the disputed phrase. The "dynamically replicated" limitations of the '474 Patent claims were added after the patent examiner objected to the existing application claims as unpatentable because they were obvious in light of the prior art. Apx. ISO Defendants AT&T Mobility LLC and AT&T Services, Inc.'s Opening Claim Construction Brief at 110 – 114. The file wrapper indicates that the examiner conducted an interview with the inventors on the matter. Id. As a result of that interview the patent examiner and the inventors appear to have agreed that the claims would not be obvious if they included the dynamic replication limitation. Id. The claims were then amended to include the dynamic replication limitations. Id. Prior to the addition of this limitation the claims did not refer to "dynamically

replicating," "inheriting," or "copying" and no other changes to the claim language were added to help understand the meaning of the "dynamically replicated." Id. The claims themselves provide no guidance as to an understanding of the disputed phrase. The Court further notes that the disputed phrase "dynamically replicated" does not have an understood meaning in the field of the invention. It appears that the inventor's created the phrase to describe the unique feature of the invention. Since the claims do not provide any guidance to the meaning of the disputed phrase and the phrase does not have any particular meaning within the field of the invention, the '474 Patent specifications and file wrapper must support the construction of "dynamically replicated."

The '474 Patent specifications provide some guidance as to the meaning of the disputed claim language. Both Parties direct the Court's attention to the same passages within the '474 Patent specifications to support their proposed constructions. These portions of the specifications address two different concepts that are discussed within the specifications. First, they address the dynamic creation of webpages. Secondly, they discuss the automatic inheritance of fields within entries in the database.

The passages that refer to dynamic creation of webpages include: "… the inventors have recognized the need for a system which **dynamically generates display documents** in order to accommodate the various kinds of information and information formats which may be found on the Internet …" ('474 Patent at 2:59-

62); "… which template parameters should be used to **dynamically construct an HTML page** suited for the display of the information contained within the notes document …" ('474 Patent at 17:61-64); "… the **generated HTML documents** are significantly different since the files are **dynamically created** rather than formed in a static format … ('474 Patent 25:63-66).

These passages do not provide any guidance as to the meaning of "dynamically replicated" as it is used in the claim language. These passages all refer to dynamic creation of webpages and HTML documents. The disputed claim language, clearly, does not refer to dynamic creation of web page and HTML documents. The claim language refers to the dynamic replication of database entries between various geographic areas. At best, the fact that both the claim language and the webpage creation passages both use the term "dynamic" could be used to understand the inventors' meaning of "dynamic." This analysis is not necessary because the Parties do not dispute the meaning of "dynamic." The Parties agree that "dynamic," as used in the claim language, means "automatic." It is the meaning of "replication" that is disputed by the Parties. They dispute whether or not "replication" means "inheriting" alone or "inheriting or copying."

The second type of passage cited by the Parties to support their claim construction contentions relates to "dynamically replicated" as it is used in the claim language. These portions of the specifications relate to the inheritance of entry fields from one geographic area to another geographic area. The specifications state: "…

The data contained within the geographic database 210 also include **reference fields** 1305 which include a reference city, reference region, …. These values are the parentage name keys **related to the current entry**, and provide the key to displaying related entries to the internet user, and **are automatically inherited** from the parent entry …" ('474 Patent at 29-36); "… The **data stored** within the geographic database 210 further **includes label fields** 1315 which include text fields shown to the user as folder titles … for each of the **parent geographic entries related to the current entry**. …. The label field 1315 is **automatically inherited** from the parent entry …" ('474 Patent at 19:46-63.) These passages describe certain fields within entries that are automatically inherited from a parent geographic area into a child geographic area. The parent geographic areas within the database contain certain fields, and those fields are automatically inherited into the entries that are created for the child geographic areas.

Both Parties refer to these portions of the specifications to support their proposed claim constructions. Geotag claims that they show that the entries are inherited or copied. AT&T points out that the passages do not refer to copying the fields. The passages refer to automatically inheriting the fields within the entries. It is clear from the specification language that the fields are automatically inherited from an entry within a parent geographic area into an entry in a child geographic area; similar to the manner in which a parent can inherit genetic information from a child. The specific information that is inherited is transferred from the parent to the child,

but inheritance does not necessarily mean that the child is an exact copy of the parent.

The specifications do not refer to copying the entries. They only refer to automatic inheritance of fields within an entry. These passages of the specifications do not support a construction that includes "copying." If the inventors' desired "dynamically replicated" to include "copying" of entries they could have easily included such a description that described "copying" of entries from one geographic area into another geographic area. Instead of this inclusion the inventors' referred to "automatic inheritance" of fields within entries.

Besides the above discussed phrases relating to the inheritance of fields from and to entries, the '474 Patent appears to be silent as to the meaning of "dynamically replicated." The '474 Patent fails to disclose any other functionality of the invention that is related to "dynamically replicated" or that further explains the inventors' meaning of the phrase, which does not have any particular meaning within the field of the invention. The Court is of the opinion that any construction of "dynamically replicated" should be limited to the description actually provided by the inventors. The construction should be limited to "inheritance" of entries.

The file wrapper indicates that the patent examiner also understood "dynamically replicated" to mean "automatic inheritance." Apx. ISO Defendants AT&T Mobility LLC and AT&T Services, Inc.'s Opening Claim Construction Brief at 110 – 114. While a patent examiner's statement as to the meaning of a claim phrase

does not conclusively define that phrase, this statement is clear evidence as to how a person of ordinary skill in the art would understand the claim language. As discussed above, the inventors and patent examiner disputed whether or not the original claims were obvious in light of the prior art. Id. As a result of this dispute, the inventors added the "dynamically replicated" limitation to the '474 Patent claims. Id. As part of this process, the patent examiner conducted an interview with the inventors. Id. The examiner's notes from that interview show that the examiner understood "dynamic replication" to mean "automatic inheritance." Id. The examiner also indicated that "dynamic replication" also referred to a parent-child relationship. Id. Even though the '474 Patent is fairly silent as to the inventors' meaning of this phrase, it does indicate that the concept involves inheritance of information and a parent-child like relationship between entries in various geographical areas. This is appears to be the exact same understanding of the concept that the patent examiner held, based on the interview with the inventors and the subsequent changes to the claim language. The patent examiner's belief as to the meaning of the phrase supports a construction of "dynamic replication" that only includes "inheriting," and does not including "copying," just like the '474 Patent specifications.

The Parties also dispute the timing of dynamic replication. Geotag proposes that the dynamic replication occurs "at the time needed rather than at a time decided or established in advance." AT&T proposes that the replication occurs "at the time of a search."

Geotag simply argues that this Court should adopt a construction of the phrase that requires dynamic replication to occur at the time needed rather than at a time decided or established in advance because the Courts in *Frontier* and *Geomas* adopted this construction. Geotag Inc.'s Opening Claim Construction Brief at 12 and Geotag Inc.'s Responsive Claim Construction Brief at 5-7. Geotag also argues that AT&T's proposed construction is incorrect because the claims do not have a "search" limitation. Id. Including "at the time of the search" would improperly limit the claims because it adds a search limitation to the claims. Id.

AT&T argues that the dynamic replication occurs at the time of the search because this is required by the claim language. Defendant's Opening Claim Construction Brief at 8-12. AT&T argues that because dynamic replication appears in Claims 1 and 20 in the language that is describing the search engine, the dynamic replication must occur at the time of the search. Id. It also argues that Claim 31 requires the dynamic replication step to occur immediately after the search engine has been directed to select a geographical area, which, AT&T argues indicates that the dynamic replication is performed at the time of the search. Id.

The Court is of the opinion that neither of the Parties' proposed constructions fully encompass the disclosed invention. Both of the proposed constructions lead to ambiguity in the claim language. The correct claim construction is one in which the Court considers the full nature and scope of the claimed invention. A claim

construction that more closely aligns the meaning of the claim language with the full nature and scope of the invention is the correct claim construction.

In this case, the disclosed invention is an invention that relates to the organization and searching of information by geographical area and topics. The invention dynamically replicates entries from one geographical area to another geographical area. As indicated by the file wrapper it is this dynamic replication of entries that made the invention patentable. Without the dynamic replication limitation the invention would not be patentable because such methods and systems either already existed in the prior art or were obvious in light on the prior art. If a system or method in which the entries to be searched within a particular geographical search area already existed before the time the user actually wanted to search the information, this system or method would not be novel. The key to novelty of the invention is the fact that the entries associated with the area to be searched did not exist ahead of time. The entries for the geographical search area are dynamically created. They are not prestored or pregenerated in the database. Geotag is partially correct in stating that the dynamic replication occurs at the time needed.

Geotag's proposed construction suffers from ambiguity. The construction fails to specify at what particular time the dynamic replication is needed. "At the time needed" could refer to any number of time points within the system or method. That construction leaves the open the question of which particular point in the process dynamic replication is needed. For example this could be interpreted to mean that

dynamic replication is needed at anyone of the following time points in the process: when the user first sits down and decides that he or she wants to perform a search; at the time the user selects an area for searching; at the time a user selects a topic for searching; at the time the user actually clicks on a search icon, or at the time the system actually receives and processes the search request; etc. Simply stating the dynamic replication occurs at "the time needed" opens up the claim language to these uncertainties and ambiguities.

AT&T's proposed construction suffers from very similar ambiguity and uncertainties. AT&T requests that this Court adopt a construction that requires dynamic replication to occur "at the time of the search." Like the case in Geotag's proposed construction, it leaves open the question of when does the search actually occur. The same questions and uncertainties that exist in Geotag's proposed construction also occur in AT&T's construction. AT&T's proposed construction is even more uncertain than Geotag's because searching a database is a process that requires many steps to occur. It would be unclear at what point during this process dynamic replication actually occurs.

AT&T's proposed construction would be improper because, like Geotag points out, the claims do not actually contain a "search" limitation. The claims describe systems or methods for organizing information into a database, which includes dynamic replication of entries and the capability to search those entries by geographical areas and/or topics. The claims do not actually require a search to occur.

The systems and method only structure the information in a certain manner that facilitates searching. Therefore, if the phrase "dynamically replicating" was construed to mean "at the time of a search" this would improperly limit the claim language because it is imposing upon the system or method that a search actually be performed.

For example, Claim 31 shows a method in which first a geographical search area is selected, then entries are dynamically replicated into that geographical search area, then the topics associated with the newly generated geographical search area entries are displayed to the user. '474 Patent at 43-56. The step involving the display of the topics is the final step in the method of Claim 31. Claim 31 does not actually require a user to then go on to perform any search of those topics. The topics are simply displayed to the user.

The Claim language does not require that a search actually be performed until one reads dependent Claims 37 and 38. Claim 37 reads as follows: "The method of Claim 36 further comprising the step of directing said search engine to select one of said topics associated with said geographical area." '474 Patent at 41:3-5. Claim 38 reads as follows: "The method of claim 37 further comprising the step of displaying said data records associated with said selected topic." '474 Patent at 41:6-8. These claims together, while they do not explicitly state that a search is performed, describe the steps of selecting a particular topic within the dynamically replicated entries of the geographical search area and the next step of displaying the records associated

with that particular geographical search area and topic. The additional steps in Claims 37 and 38 describe the search process and the related display of the particular results of that search. The fact that the inventors included the search process and the display of the search results in claims that are dependent on the method claimed by Claim 31 further shows that Claim 31 does not actually require a search, that the inventors did not intend for Claim 31 to require a search, and that a person of the ordinary skill in the art would read these claims together, along with the rest of the '474 Patent, and understand that Claim 31 did not require a search. The Court refuses to adopt AT&T's proposed construction that requires dynamic replication to occur at the time of a search.

From an understanding of the full nature and scope of the claimed invention and from the claim language itself, the timing of the dynamic replication may be determined. As just discussed above that timing is not at the time of a search, as proposed by AT&T, nor at the time needed, as proposed by Geotag. From the claim language, the dynamic replication must occur after the geographic search area is selected. Claims 1, 20, and 31 require that there be a database of information that is organized into various geographical areas. They also then require that a user select a particular geographical area that is to be searched. All claims go on to require that the information stored in the database about certain geographical areas be dynamically replicated into a "geographical search area." In Claim 1 this event occurs from a broader area into a narrower area. '474 Patent at 52-56. In Claim 20 this event

occurs from a larger geographical area to a smaller geographical area. '474 Patent at 52-61. In Claim 31 this occurs from a broader are into the geographical search area. '474 Patent at 53-54. From a plain reading of the claim language, the dynamic replication occurs after the user selects a particular geographical area to be searched. At this point the entries are dynamically replicated. Dynamically replicating the entries cannot occur before a geographical search area is selected. The geographical search area must be selected before replication of the entries, because prior to selection of the geographical search area the particular geographical area from the hierarchy or plurality of geographical areas the entries should be replicated from is unknown. Determination of these areas cannot be determined until a user selects the desired geographical search area of the system or method. The Court is of the opinion that the dynamic replication must occur after the selection of a geographical search area.

This construction also naturally aligns with the full nature and scope of the invention and with the key distinguishing feature of the invention that makes that invention patentable in light of the prior art. In order to make the claims novel, the inventors had to add the dynamic replication limitation to the claims. A system or method that had predetermined or pregenerated the entries associated with the geographical search area would not have been patentable because such a system was already in existence in the prior art or was obvious in light of the prior art. This means that a database that already contained entries associated with a particular

geographical search area before a user selected that geographical search area would not be a novel invention. This cannot be what is described by the '474 Patent. The '474 Patent requires that the entries associated with the geographical search area not be in existence before the user selects that geographical search area. In other words, in order for the disclosed invention to be patentable, it must dynamically replicate the entries for the geographic search area after such geographic search area is selected.

Because the Parties proposed constructions would lead to ambiguity in the claim language and the claim language and the nature and scope of the invention dictate that dynamic replication occur after selection of a geographical search area the Court is of the opinion that dynamic replication occurs after the selection of a geographical search area, and that any construction of "dynamically replicated" should take into account this limitation of the claims. In regards to whether or not "dynamically replicated" includes copying, the Court is of the opinion that any construction of "dynamically replicated" should take into account: (1) that the claim language does not clarify the meaning of this phrase; (2) the inventors chose to use this phrase in the claims; (3) the phrase does not have a commonly understood meaning in the field of the invention; (4) the '474 Patent specifications only describe inheriting information; and (5) the file wrapper indicates that the meaning of the phrase is automatic inheritance. The Court construes "dynamically replicated" to mean "automatically inherited within the database after selection of a geographical

search area," and "dynamically replicating" to mean "automatically inheriting within the database after selection of a geographical search area."

F. Construction of "hierarchy"

i. Each Party's Proposed Constructions

The Parties dispute the meaning of the phrase "hierarchy" used in the Claims of the '474 Patent. The Parties are in agreement that the meaning of "hierarchy" is the same throughout the '474 Patent. The Court will construe the meaning of "hierarchy" the same throughout the '474 Patent.

Geotag proposes that the Court construe "hierarchy" to mean "an arrangement of related information or data, ordered from broader categories to narrower specific ones." Joint Statement Narrowing the Disputed Terms for Construction. AT&T proposes that the Court give "hierarchy" it's plain and ordinary meaning, without proposing what that plain and ordinary meaning would be. Id.

In support of its argument that hierarchy should be construed to mean "an arrangement of related information or data, ordered from broader categories to narrower specific ones," Geotag argues that the term is used in the '474 Patent to describe a general organization of data, as opposed to a specific structure of a database. Geotag, Inc's Opening Claim Construction Brief at 8-10. Geotag asserts that a hierarchical database is not what is claimed by the '474 Patent. Id. A hierarchical database is a particular type of database that incorporates the information into a tree like structure and that this is not what is required by the

"hierarchy" limitation of the '474 Patent. Id. Geotag asserts that its proposed construction is correct because it addresses this distinction between what the limitation actually requires and the commonly accepted meaning of a hierarchical database. Id.

Geotag argues that the claim language and the specifications support its proposed construction. Id. Geotag argues that the specifications describe that there is a relationship between the entries in the database, but that the specifications do not limit that relationship to a tree like structure. Id. Geotag further asserts that the Courts in *Frontier* agreed with Geotag's proposed construction. Id.

AT&T argues that "hierarchy" should be given its plain and ordinary meaning. Defendant's Opening Claim Construction Brief at 20-21. However, AT&T does not provide to the Court a proposed plain and ordinary meaning of "hierarchy." Id. In support of its contention, AT&T argues that "hierarchy" is a term that is easily understood by the lay juror; therefore, there is no need to further define the meaning of the term. Id. AT&T also argues that Geotag's proposed construction is improper because the '474 Patent requires the geographical areas to be in a hierarchy, and the proposed construction improperly puts categories into a hierarchy, not geographical areas. AT&T also argues that the proposed construction is improper because it includes both "information" and "data" in the hierarchy, while the '474 Patent only puts "information" into a hierarchy. Id. Finally, AT&T argues that the proposed construction is incorrect because the '474 Patent does not provide any support for

Geotag's proposed language requiring that the information be "ordered from broader to narrower." Id. For these reasons, AT&T argues that "hierarchy" should be given its plain and ordinary meaning. Id.

ii. Court's Construction of "hierarchy"

The Court is of the opinion that adoption of a construction that reflects Geotag's proposed construction of "hierarchy" and the concerns raised by Geotag more closely reflects the true nature of the invention than simply giving "hierarchy" a plain and ordinary meaning without further specifying that plain and ordinary meaning. This construction is also supported by the intrinsic evidence provided to the Court.

The Court starts by looking at the claim language itself. The language of Claims 1 and 20 claim refer to a hierarchy of geographical areas; however, these claims themselves do not impose any limitations onto the actually structure or meaning of hierarchy. Claim 1 refers to a "hierarchy of geographical areas wherein entries corresponding to each one of said hierarchy of geographical areas is further organized into topics." '474 Patent 38:44-47. The claim goes on to state that the geographical search area "wherein within said hierarchy of geographical areas at least one of said entries associated with a [broader] geographical area is dynamically replicated into at least [one] narrower geographical area." '474 Patent 38:52-56. Claim 20 of the '474 Patent describes the hierarchy as a "predetermined hierarchy of geographical areas comprising at least a geographical area of relatively smaller expanse

and a geographical area of relatively larger expense, said area of larger expanse including a plurality of areas of smaller expanse." '474 Patent 39:44-49.

The language of Claim 1 provides a different description of hierarchy than that of Claim 20. The language of Claim 20 is more limiting than that of Claim 1. Claim 1 does not impose any limitations on the nature or structure of the hierarchy. Claim 1 simply recites that the geographical areas are in a hierarchy and that the dynamic replication of an entry may occur where the entry is dynamically replicated from a broader area into a narrower area. The fact that the claim does not describe or limit the hierarchy to anything more than "broader" and "narrower" supports a finding that the meaning of hierarchy is not limited to a simple tree like structure.

Claim 20, however, presents a different picture of the hierarchy. That claim limits the hierarchy so that there are larger geographical areas and smaller geographical areas and each smaller area is incorporated into a larger area. Each larger area contains multiple smaller areas.

This description of the structure of the hierarchy is more limiting than that of Claim 1. Whereas, Claim 1 merely refers to broader and narrower geographical areas, Claim 20 incorporates the limitation that smaller areas are included in larger areas. While the hierarchy of Claim 20 reflects a hierarchy that is more "tree like," it also does not require a tree like hierarchy. For example, there is no requirement that the smaller areas within the larger areas do overlap. Even more telling is the difference in the claim language of Claims 1 and 20 that indicates that the meaning of hierarchy is

broad and not limited because the inventors used the term in different ways in the two claims.

Other claim language also supports this conclusion. Claim 5 of the '474 Patent, which states that the hierarchy "has a structure comprising plural geographical levels into which the geographical areas are geographically categorized by size to provide a low level, one or more intermediate levels and a high level, each of the geographical levels above the lowest level encompassing a plurality of lower level geographical areas." '474 Patent 38:66-39:5. The Court points out that Claim 5 is a dependent claim of Claim 1, in which Claim 5 further limits the structure of the hierarchy. While Claim 1 provides a general description of the hierarchy as containing broader and narrower areas, Claim 5 further limits the structure of the hierarchy to one where the geographical areas are structured by size and each smaller size area is incorporated into a larger sized area. The structure of the hierarchy of dependent Claim 5 must be more limiting than the structure of independent Claim 1 and any construction of "hierarchy" must take this into consideration.

The claims go on to describe even more specific hierarchy structures. Claim 6, which is a dependent claim of Claim 5, goes on to even further limit the structure of the hierarchy. In particular, Claim 6 provides that the hierarchy contains geographical areas where the low level is a city, the intermediate level is a territory, and the high level is a state. '474 Patent 39:6-8. A true tree like hierarchical database is not described by the claims until one reaches Claim 6, which is dependent on Claim 5,

which is even further dependent on Claim 1. The fact that each one of the dependent claims further imports limitations on the meaning of hierarchy in Claim 1 supports a broad meaning of the term "hierarchy" as used in Claim 1 of the '474 Patent and in the other claims of the '474 Patent.

What is evident from the claim language is that the hierarchy is structured from broader geographical areas into narrower geographical areas. This limitation is described in Claim 1, when the claim speaks of dynamically replicating the entries from broader areas into narrower areas. The dependent Claims 5 and 6 continue on with the "broader" and "narrower" distinctions between the geographical areas asserted by Claim 1. Claim 5 requires the areas to be categorized by size, with larger sizes encompassing smaller sizes. Claim 6 further requires the areas that are cities to be incorporated into the areas that are territories, which are further incorporated into the areas that are states. Both Claims 5 and 6 describe broader areas that include within them narrower areas because smaller areas are certainly narrower than larger areas and cities are narrower than territories, which are in turn narrower than states. The same is true for Claim 20, which requires smaller areas to be incorporated into larger areas, which are broader than the smaller areas. The claim distinctions between broad areas and narrow areas continue throughout the claim language and must be considered when construing the meaning of "hierarchy."

The specifications of the '474 Patent also support a construction of the term "hierarchy" that is consistent with Geotag's proposed construction. Like the claims,

the specifications generally describe a hierarchy that is limited in its structure in only that the geographical areas are organized in relatively broader and narrower areas. The specifications generally describe a "database of information organized into a hierarchy of geographical areas." '474 Patent at 3:3-4. Such description does not impose limitations upon the structure of the hierarchy. However, like the claims, the specifications go on to provide more detailed examples of the possible structures of the hierarchy. For example, in one possible embodiment the hierarchy has a "… structure comprising plural geographical levels into which the geographical area are geographically categorized by size to provide a low level, one or more intermediate levels and a high level …" ('474 Patent at 3:19-22); a "… predetermined hierarchy of geographical areas comprising at least a geographical area of relatively small expanse, a geographical area of intermediate expanse and a geographical area of relatively large expanse …" ('474 Patent at 3:50-54.); "… the databases are organized in a hierarchy which descends from the most universal to least universal …." ('474 Patent at 8:60-61.).

The description of hierarchies in the '474 Patent specifications are no different than those of the claims in that they both generally discuss a hierarchy of geographical areas. They also both provide an understanding that there is no particular limitation to the structure of the hierarchies of the '474 Patent besides organization in relatively broader and narrower categories. The Court is of the opinion that any construction of the disputed term must take into account the

manner in which the term is used in both the claims and the specifications and that Geotag's proposed construction does so.

The parties also dispute whether or not the hierarchies consist of organized "information and data" or simply consist of organized "information." Geotag proposes that the correct construction includes both information and data. AT&T proposes that only information be included in the construction.

The Court notes that each disputed claim already contains a limitation about what is stored within the databases of the invention. Claim 1 requires "…a database of **information** organized into a hierarchy of geographical areas…" '474 Patent at 38:35-58; Claim 20 requires "… a database of **information** accessible [by] a computer, said database of **information** organized into a predetermine hierarchy of geographical areas …" Id at 39:41-61; Claim 31 requires "… organizing a database of on-line ***information*** into a plurality of geographical areas …." Id at 40:43-56. Each of these claims already provides a limitation regarding what is stored in the database. In particular, each one requires a **database of information**. A construction that merely repeats the term "information" would just repeat the limitation that is already provided in other claim language. Because this limitation is already included in other claim language, there is no need to repeat the limitation in the construction of "hierarchy." This construction would at best be repetitive and at worst could lead to jury confusion over the meaning of the claim language. To construe "hierarchy" to include both "information and data" would make this problem even worse. Such a

construction would not only repeat the "information" limitation it would modify that limitation by adding "data" into the meaning.

When the Parties requested the Court to determine if the hierarchy is composed of "information" or if it is composed of "information and data," the Parties are really asking the Court to construe the meaning of "information" as it is used in the '474 Patent claims. "Information" as used in the '474 may include data. The Parties did not request that the Court construe "information," and the Parties did not provide any substantial briefing or argument on the meaning of "information." The Parties requested the Court to construe "hierarchy," and in this order the Court will limit its construction to the term "hierarchy." The Court is of the opinion that the construction of "hierarchy" should not include the terms "information" or "information and data" because this limitation is already provided by other claim language.

Because the only limitation that is imposed on the hierarchy of the claims of the '474 Patent is that the hierarchy be structured into relatively broader and narrower geographical areas, the hierarchy is not required to have a "tree" like structure, the claim language already addresses that it is information that is stored within the database the Court hereby construes "hierarchy" to mean "an arrangement ordered from broader to narrower."

G. Construction of the larger dynamically replicated terms

i. Each Party's Proposed Constructions

In addition to the above phrases and terms, AT&T also requests that the Court construe what the Parties refer to as the "larger dynamically replicated terms." These are three certain larger claim phrases that contain the phrases and terms previously construed. Geotag contends that no separate construction of these phrases is needed. The constructions requested by AT&T and its proposed constructions are as follows:

Claim 1 - larger dynamically replicated phrase:

> "wherein within said hierarchy of geographical areas at least one of said entries associated with a [broader] geographical area is dynamically replicated into at least [one] narrower geographical area" '474 Patent at 38:52-56.

Claim 1 - AT&T's proposed construction:

> "wherein within the hierarchy of geographical areas in the database at least one of the entries associated with a broader geographical area within the database is automatically inherited within the database, at the time of a search, into at least one narrower geographical area within the database."

Claim 20 larger dynamically replicated phrase:

> "wherein at least one of said entries in said geographical area of relatively larger expanse is dynamically replicated into at least one of said geographical areas of smaller expanse" '474 Patent at 39:56-59.

AT&T's proposed construction:

> "wherein at least one of the entries in the larger geographical area within the database is automatically inherited within the database, at the time of a search, into at least one smaller geographical area within the database"

Claim 31 larger dynamically replicated phrase:

> "dynamically replicating an entry from broader geographical area into said geographical search area" '474 Patent at 40:53-54.

AT&T's proposed construction:

> "automatically inheriting within the database, at the time of a search, an entry from the broader geographical area within the database into the geographical search area within the database"

AT&T argues that construction of these larger phrases is necessary because it is necessary to confirm that the various geographical areas are in the database and that dynamic replication of the entries from a geographical area into the geographical search area occurs within the database. Defendants' Responsive Claim Construction Brief at 6-9. Geotag argues that it is not necessary to construe the larger dynamically replicating phrases and that AT&T's proposed construction improperly read limitations into the claims. Geotag Inc.'s Responsive Claim Construction Brief at 7-8. The proposed constructions impose the limitation that the geographical areas are "within the database." Id.

ii. Court's Construction of the larger dynamically replicated terms

AT&T's proposed construction of these phrases does three things. First, they incorporate AT&T's proposed constructions of the disputed individual claim language. Second, they modify the phrases "said geographical area of relatively larger expanse" and "at least one of said geographical areas of smaller expanse" to, respectively read "the larger geographical area" and "at least one smaller area." Third, they add the "in the database" requirement, which AT&T claims adds clarification

that the dynamic replication occurs within the database and that the various geographical areas are in the database. Regarding the first change, the inclusion of AT&T's other proposed language of disputed terms, the Court notes that it is not necessary to reconstrue the individual disputed claim terms and phrases. Regarding, the second change, the modification of the larger and smaller expanse phrases, AT&T fails to provide any argument why this change should be made; therefore the Court refuses to include these changes in any construction of these phrases. The real issue is the third modification, whether or not the larger phrase should be construed so that they include the "in the database" language.

The dispute is over whether the dynamic replication occurs in the database and whether the various geographical areas (the hierarchy of geographical areas, broader geographical area, the narrower geographical area, the geographical search area, geographical area of relatively larger expanse, and the smaller geographical) are in the database. AT&T argues that the claim language itself confirms that the dynamic replication occurs in the database and that the geographic areas are in the database. It also argues that the Parties are in agreement that at least the "geographic search area" is within the database. Defendant's Responsive Claim Construction Brief at 6-8. Geotag agrees that the "geographic search area" is within the database. Geotag's Opening Claim Construction Brief at 19. In addition both Parties are in agreement that dynamic replication occurs within the database because they have both submitted proposed constructions of "dynamically replicated" that state that this

occurs within the database. The real dispute is whether or not the other geographical areas (broader, narrower, larger, and smaller) are within the database.

AT&T argues that these other geographical areas are within the database and that the claim language supports this interpretation. Specifically, AT&T points to the claim language that requires that the database contains a hierarchy of geographical areas and that the other geographical areas are included within that hierarchy. Defendants' Responsive Claim Construction Brief at 6-8. As AT&T points out: Claim 1 recites "… a database of information organized into a hierarchy of geographical areas …" and "… within said hierarchy of geographical areas at least one of said entries associated with a broader geographical area is dynamically replicated into at least one narrower geographical area …" ('474 Patent at 38:35-58); Claim 20 recites "… said database of information organized into a predetermine hierarchy of geographical areas comprising at least a geographical area of relatively smaller expanse and a geographical area of relatively larger expanse …" (Id at 39:41-61); and Claim 31 recites "… organizing a database of on-line information into a plurality of geographical areas …," "… directing a search engine executing in a computer to select one or more of said geographical areas so as to select a geographical search area…," and "… dynamically replicating an entry from broader geographical area into said geographical search area …" (Id at 40:43-56).

The language of Claims 1, 20, and 31 confirm that the other geographical areas are within the database. The broader and narrower areas of Claim 1 are part of the

hierarchy of geographical areas and that hierarchy is within the database. Likewise, the relatively smaller and relatively larger geographic areas of Claim 21 and the geographical areas of Claim 31 are part of the hierarchy or plurality of the geographical areas that are within the database. In addition to this, the Parties already agree that dynamic replication occurs within the database. The other geographical areas described by the claims indicate where entries are dynamically replicated from and where entries are dynamically replicated to, all of which it is agreed, occurs within the database. Therefore, the claim language itself requires that all of the other geographical areas be in the database, just like the geographical search area is within the database and the dynamic replication occurs within the database.

The Court is not persuaded by Geotag's argument that a construction of the larger dynamically replicated terms that includes the "in the database" phrase improperly reads limitations into the claims. As just discussed, the claim language itself requires that these areas be in the database; therefore addition of the "in the database" phrase does not impart any additional limitations into the claim language. This construction merely clarifies that the other geographical areas are within the database. Geotag's argument that the inclusion of the "in the database" language improperly limits the claim is merely a conclusive statement with no explanation of why this would improperly limit the claim language. Geotag Inc.'s Opening Claim Construction Brief at 19; Geotag Inc.'s Responsive Claim Construction Brief at 7-8.

Because the parties agree that dynamic replication occurs in the database, that the geographical search area is in the database, and the claim language requires the other geographical areas to be in the database the Court construes the larger dynamically replicated phrase as follows:

Claim 1 - larger dynamically replicated phrase:

> "wherein within said hierarchy of geographical areas at least one of said entries associated with a [broader] geographical area is dynamically replicated into at least [one] narrower geographical area"

Claim 1 – Court's Construction:

> "wherein within said hierarchy of geographical areas **in the database** at least one of said entries associated with a broader geographical area **within the database** is dynamically replicated into at least one narrower geographical area **within the database**."

Claim 20 - larger dynamically replicated phrase:

> "wherein at least one of said entries in said geographical area of relatively larger expanse is dynamically replicated into at least one of said geographical areas of smaller expanse"

Claim 20 - Court's Construction:

> "wherein at least one of said entries in said geographical area of relatively larger expanse, **within the database**, is dynamically replicated into at least one of said geographical areas of smaller expanse, **within the database**"

Claim 31 larger dynamically replicated phrase:

> "dynamically replicating an entry from broader geographical area into said geographical search area" '

Claim 31 - Court's Construction:

"dynamically replicating, an entry from broader geographical area **within the database** into said geographical search area"

The Court notes that for the sake of clarity as to the construction of the larger dynamically replicated phrases, in the above constructions, the Court has not incorporated the constructions of the other disputed claim language that is construed within the phrases. Such individual terms or phrases construed herein as they occur in the larger dynamically replicating phrases shall be incorporated within the larger phrases to the extent the individual terms are contained within the larger phrases.

IV. Construction of Agreed Terms

The Court notes that the Parties have submitted to the Court certain claim terms and phrases that the Parties state need to be construed, but the Parties agree as to the meaning of the terms and phrases. The Court hereby adopts the agreed constructions proposed by the Parties as described in the Joint Claim Construction Chart on file with the Court.

SO ORDERED.

Signed June 10th, 2014.

Ed Kinkeade

ED KINKEADE
UNITED STATES DISTRICT JUDGE

SUMMARY CHART OF CLAIM CONSTRUCTIONS OF PRIORITY TERMS

Construction of Terms of Patent No. 5,930,474

Language of Disputed Priority Term of Claims	Plaintiffs' Proposed Construction	Defendant's Proposed Construction	Judge's Construction
Claim 1 A system which associates on-line information with geographic areas, said system comprising: a computer network wherein a plurality of computers have access to said computer network; and an organizer executing in said computer network, wherein said organizer is configured to receive search requests from any one of said plurality of computers, said organizer comprising: a database of information organized into a **hierarchy** of geographical areas wherein **entries** corresponding to each one of said **hierarchy** of	**Hierachy** an arrangement of information or data, ordered from broader general catagories to narrower specific ones **Entries** listings contained in the database and that each includes one or more fields	**Hierachy** plain and ordinary meaning **Entries** listings contained in the database that each includes a collection of fields.	**Hierachy** arrangement ordered from broader to narrower **Entries** listings contained in the database that each includes a collection of fields

geographical areas is further organized into topics and a search engine in communication with said database, said search engine configured to search geographically and topically, said search engine further configured to elect one of said **hierarchy** of geographical areas prior to selection of a topic so as to provide a **geographical search area** *wherein within said* ***hierarchy*** *of geographical areas at least one of said* ***entries*** *associated with a [broader] geographical area is* ***dynamically replicated*** *into at least [one] narrower geographical area*, said search engine further configure to search said topics within said selected **geographical search area**.	**Geographical Search Area** the particular selected geographical area within the database for which the associated data records in the database are to be searched **Dynamically Replicated** automatically copied or inherited within the database, at the time needed or established in advance ***Larger Dynamic Replication Phrase*** No construction necessary	**Geographical Search Area** the particular selected geographical area of the hierarchy of geographical areas within the database for which the associated entries in the database are to be searched **Dynamically Replicated** automatically inherited within the database at the time of the search ***Larger Dynamic Replication Phrase*** *wherein within the hierarchy of geographical areas in the database at least one of the entries associated with a broader geographical area within the database is automatically inherited within the database, at the time of a search, into at least one narrower geographical area within the database."*	**Geographical Search Area** the particular selected geographical area within the database for which the associated entries in the database are to be searched **Dynamically Replicated** automatically inherited within the database after selection of a geographical search area ***Larger Dynamic Replication Phrase*** *wherein within said hierarchy of geographical areas in the database at least one of said entries associated with a broader geographical area within the database is dynamically replicated into at least one narrower geographical area within the database*
Claim 20			

A machine for locating information organized into geographically-based areas, said machine comprising: a database of information accessible [by] a computer, said database of information organized into a predetermine **hierarchy** of geographical areas comprising at least a geographical area of relatively smaller expanse and a geographical area of relatively larger expanse, said area of larger expanse including a plurality of areas of smaller expanse and wherein **entries** corresponding to each said hierarchy of geographical area is further organized into topics; and a search engine executing in a computer and in communication with said database, said search engine configured to select at least one geographical area in said **hierarchy** of geographical areas so as to define a	**Hierachy** an arrangement of information or data, ordered from broader general catagories to narrower specific ones **Entries** listings contained in the database and that each includes one or more fields **Geographical Search Area** the particular selected geographical area within the database for which the associated data records in the database are to be searched	**Hierachy** plain and ordinary meaning **Entries** listings contained in the database that each includes a collection of fields. **Geographical Search Area** the particular selected geographical area of the hierarchy of geographical areas within the database for which the associated entries in the database are to be searched	**Hierachy** arrangement ordered from broader to narrower **Entries** listings contained in the database that each includes a collection of fields **Geographical Search Area** the particular selected geographical area within the database for which the associated entries in the database are to be searched

geographical search area *wherein at least one of said* ***entries*** *in said geographical area of relatively larger expanse is* ***dynamically replicated*** *into at least one of said geographical areas of smaller expanse,* said search engine further configured to search said topics within said geographical area.	**Dynamically Replicated** automatically copied or inherited within the database, at the time needed or established in advance ***Larger Dynamic Replication Phrase*** No construction necessary	**Dynamically Replicated** automatically inherited within the database at the time of the search ***Larger Dynamic Replication Phrase*** *wherein at least one of the entries in the larger geographical area within the database is automatically inherited within the database, at the time of a search, into at least one smaller geographical area within the database*	**Dynamically Replicated** automatically inherited within the database after selection of a geographical search area ***Larger Dynamic Replication Phrase*** *wherein at least one of said entries in said geographical area of relatively larger expanse, within the database, is dynamically replicated into at least one of said geographical areas of smaller expanse, within the database*
Claim 31 A method for locating on line information comprising the steps of: organizing a database of on-line information into a plurality of geographical areas having a plurality of entries associated therewith; organizing said **entries** corresponding to said plurality of geographical areas into one or more	**Geographical Search Area** the particular selected geographical area within the database for which the associated data records in the database are to be searched **Dynamically Replicating** automatically copying or inheriting within the database, at the time needed or established in	**Geographical Search Area** the particular selected geographical area of the hierarchy of geographical areas within the database for which the associated entries in the database are to be searched **Dynamically Replicating** automatically inheriting within the database at the time of the search	**Geographical Search Area** the particular selected geographical area within the database for which the associated entries in the database are to be searched **Dynamically Replicating** automatically inheriting within the database after selection of a geographical search area

topics; directing a search engine executing in a computer to select one or more of said geographical areas so as to select a **geographical search area**; ***dynamically replicating*** *an* ***entry*** *from broader geographical area into said geographical search area*; and displaying said topics associated with said geographical search area.	advance **Entry/Entries** listing(s) contained in the database and that (each) includes one or more fields ***Larger Dynamic Replication Phrase*** No construction necessary	**Entry/Entries** listing(s) contained in the database that each includes a collection of fields. ***Larger Dynamic Replication Phrase*** *automatically inheriting within the database, at the time of a search, an entry from the broader geographical area within the database into the geographical search area within the database*	**Entry/Entries** listing(s) contained in the database that (each) includes a collection of fields ***Larger Dynamic Replication Phrase*** *dynamically replicating, an entry from broader geographical area within the database into said geographical search area*